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EXAMINER

SHALLENDERGER, JULIE A

ART UNIT

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2885

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/574,376

Applicant(s)

MERTENS, JENS

Examiner

JULIE A. SHALLENBERGER

Art Unit

2885

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/808)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

The amendments files 12/17/07 have been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 6, 7, 10, 12, 13, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sorg (6,746,295).

In regard to claim 12, Sorg teaches a lighting element comprising a light source 2, a (transparent) light guide body 4 spaced a predetermined distance from the light source forming a gap therebetween wherein the light emitted is focused light (col. 2 lines 48-55), a layer of plastic 3 disposed between the light source and the light guide which positions the light source relative to the light guide, and injection molding (col. 23 line 50), but does not explicitly teach the plastic covering the light guide body to form a wall defining a thickness less than or equal to three-times the predetermined distance between the light guide and the light source (col. 4 lines 25-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the plastic covering the light guide body to form a wall defining a thickness less than or equal to three-times the predetermined distance between the light guide and the light source, since it has been held that discovering an

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optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Furthermore, the thickness of the plastic covering appears to have a wall thickness of less than three times the distance between the light source and the light guide (see figure 2), and it would therefore be obvious to one of ordinary skill in the art at the time the invention was made to make the wall thickness in that range.

In regard to claims 1 and 7, Sorg teaches the invention described above and injection molding of the basic body of the lighting unit, but does not explicitly teach injecting the transparent plastic around the diode as recited in claim 1 or molding the lens into combination with the diode and inserting the light guide body and injected layer in an additional molding step as recited in claim 7. However, the applicant is advised that, even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 227 USPQ 964, (Fed. Cir. 1985). In this case, the cited limitations failed to distinguish the claimed structure from the patented lighting apparatus of Sorg. See MPEP § 2113

Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to injection mold the transparent plastic, mold the lens into

combination with the diode, and insert the light guide body and injected layer in an additional molding step in order to add precision and accuracy during the manufacturing process of the lighting element.

In regard to claim 2, Sorg teaches the lower edge of the transparent plastic engaging radially around the surface of the light emitting diode and ending below a plane which runs normal to the centerline of the diode and through the center of gravity of the diode (figure 2).

In regard to claim 3, Sorg teaches the diode and light guide body located on a common centerline wherein the centerline runs through the center of gravity of the chip of the diode (figure 2, col. 4 lines 26-46) .

In regard to claim 6, Sorg teaches the light guide body including a concave recess 4A toward the diode (col. 4 lines 59-65).

In regard to claim 10, Sorg teaches converter substance admixed in the transparent material for converting the wavelength of the emitted light of the diode (col. 2 lines 62-65).

In regard to claim 13, Sorg teaches the plastic 3 covers at least fifty percent of the light source (figure 2, col. 4 lines 26-46).

In regard to claim 15, Sorg teaches a lower edge of the plastic 3 disposed about and engaging the light source (figure 2,).

In regard to claim 16, Sorg teaches the light source and the light guide being coaxial (figure 2).

In regard to claim 17, Sorg teaches a light emitting diode as a light source (col. 4 lines 52).

In regard to claim 18, the light emitting diode and the light guide are coaxial (figure 2).

In regard to claim 19, the light guide body includes a concave recess 4A disposed adjacent to and coaxial with the light emitting diode (figure 2).

Claims 4, 5, 8, 11, and 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sorg in view of Serizawa (4,733,335).

Sorg teaches the invention described above, but lacks the teaching of several lighting elements arranged adjoining to one another as recited in claim 4, wherein the individual centerlines of the lighting elements are arranged parallel to one another as recited in claim 5, a diffusing screen as recited in claims 8, 20, and 21, wherein the light guide has a different color than the diffusing screen as recited in claims 9 and 22, wherein the diodes are fixed to a circuit board, as recited in claim 11, an integrated circuit board as recited in claim 23.

Serizawa teaches several lighting elements 111 arranged adjoining to one another as recited in claim 4, wherein the individual centerlines of the lighting elements are arranged parallel to one another (figure 2) as recited in claim 5, a diffusing screen 124 as recited in claims 8, 20, and 21, wherein the diodes are fixed to a circuit board 110, as recited in claim 11 (col. 4 lines 1-60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the light sources of Sorg so that multiple lighting elements are all connected together on a printed circuit, as taught by Serizawa, in order to assemble a multiple light –illuminating device that is brighter and able to be used for more lighting applications and it would have been obvious to add a colored diffusing screen as taught by Serziawa in order to alter the color of the emitted light in order to meet particular specifications of design applications or to increase the aesthetic appeal of the lighting element.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sorg in view of Fujita (6,517,231).

Sorg teaches the invention described above, including a colored diffusion screen 324 (col. 10 lines 16-17), but lacks the teaching of the light guide having a different color than the diffusing screen.

Fujita teaches a colored filter (any desired color) and a fluorescent light guide plate 22 (col. 10 lines 16-17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the light guide of Sorg a different color, as taught by Fujita, in order to emit the desired wavelength from the lighting element.

Claim 22-24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sorg in view of Serizawa and further in view of Fujita

Sorg and Servizawa teach the invention described above, including Sorg's teaching of a colored diffusion screen 324 (col. 10 lines 16-17), and a flattened lateral side of the light guide body 4 (see portion of the light guide which extends below basic body 1 –figure 2) as recited in claim 24, but lacks the teaching of the light guide having a different color than the diffusing screen as recited in claim 22.

Fujita teaches a colored filter (any desired color) and a fluorescent light guide plate 22 (col. 11 lines 4-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the light guide of Sorg a different color, as taught by Fujita, in order to emit the desired wavelength from the lighting element.

In regard to claim 23, Sorg teaches the invention described above, but does not explicitly teach using an integrated printed circuit board. Serizawa teaches a printed circuit board 110, however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an integrated circuit in order to fit more components and increase the overall functioning capacity of the lighting device (ie. program lighting modes etc.)

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Strokes (2004/0124429) and Hsiung (6,828,590) teach relevant lihgitng elements.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JULIE A. SHALLENBERGER whose telephone number is (571)272-7131. The examiner can normally be reached on Monday - Friday 830-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jong-Suk (James) Lee can be reached on 571-272-7044. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAS
AU 2885

/Jong-Suk (James) Lee/
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